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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,292	09/25/2000	Andreas Meyer	32238W020	1281
7590 05/03/2004				
Smith, Gambrell & Russell, LLP Beveridge, DeGrandi, Weilacher & Young Intellectual Property Group 1850 M Street, N.W., Suite 800 Washington, DC 20036		EXAMINER MAKI, STEVEN D		
		ART UNIT PAPER NUMBER 1733		
DATE MAILED: 05/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/668,292

Applicant(s)

MEYER ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004 and 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-10, 12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-10, 12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-16-04 has been entered.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 8-10, 12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 8 and 14, the description of distance RA is ambiguous and confusing since an area does not define a single point and "said transition area" appears to be outside the tread edges. In each of claims 8 and 14, it is suggested to change "said transition area to said shoulder radius" to --the transition from the third radius TRA to said shoulder radius--.

Also, --and-- on line 3 of claim 8 should be deleted.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5) **Claims 8-10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokutake (US 5117886) and optionally Japan '802 (JP 4-87802) and / or optionally Iwasaki et al (US 6073668).**

Tokutake discloses a high performance tire having a tread wherein the contour of the tread is defined by only four radii K1, K2, K3 and K4. As an example, Tokutake describes K1 = 1600 mm, K2 = 470 mm, K3 = 90 mm, K4 = 20 mm. See column 6 lines 50-60. Hence, the second radius is 29% first radius (falling with the claimed range of 10-95% first radius). The third radius is 5.6 % first radius falling within the claimed range of 5-65% first radius). It is acknowledged that these values are for the vulcanized tire in the mold shown in figure 1 instead of the mounted and inflated tire. The mounted and inflated tire is illustrated in figure 2. One of ordinary skill in the art would readily understand that the mounted and inflated tire also has four radii since (1) the contour of the tread in the mounted and inflated tire shown in figure 2 is not flat and (2) Tokutake teaches that the use of multiple radii such as three or more (or preferably four or more) improves the ground contact performance of the tread, and (3) ground contact performance is determined using a mounted and inflated tire instead of using a vulcanized tire in a mold. The claimed ranges of 10-95% and 5-65% are sufficiently broad that the increase in the curvature due to inflation does not cause Tokutake's ratios of 29% and 5.6% respectively to fall outside of the claimed ranges. In any event: It would have been obvious to one of ordinary skill in the art to provide Tokutake's tire with a tread contour defined by only four radii such that the second radius for the *mounted and inflated* tire is 10-95% of the first radius and the third radius is 5-65% of

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the first radius in view of (1) Tokutake's teaching to define the tread of a high performance tire using four radii to improve ground contact performance and (2) Japan '802 and/or Iwasaki et al's teaching to define the tread of a *mounted and inflated* high performance tire using multiple radii (i.e. three radii). Japan '802 teaches using such multiple radii to improve running stability and durability. Iwasaki et al teaches using such multiple radii to improve ground pressure distribution. As to the contour being defined when the tire is mounted and inflated, Japan '802 teaches this subject matter in light of (a) Japan '802's teaching that the ratio of cross sectional height H1 to maximum section width WA is .55-.70 with an inflated radial tire 1 (this information obtained during a partial oral translation of Japan '802) and (b) figure 1 which shows H1, WA, RC, RM and RO for a tire 1 mounted on a rim. As to the contour being defined when the tire is mounted and inflated, Iwasaki et al teaches this subject matter as can be clearly seen from col. 1 lines 32-52. As to the equation in the last line of claim 8, see width of region 26a in figure 1a. In any event: the limitation of the first radius defining an area of 10-70% tread width would have been obvious since (1) figure 1 of Tokutake illustrates the largest first radius K1 as defining a central tread region and optionally (2) Japan '802, which like Tokutake uses multiple radii for a tread of a high performance tire, suggests using the first radius (largest radius) to define a central tread region having a width of 35% tread width.

Tokutake is silent as a distance RA being 1.5-14% tread width. There is no evidence of record showing that Tokutake's tire inherently satisfies the limitation of a distance RA being 1.5-14% TW. In claim 8, the distance RA of 1.5-14% defines the

area of the tread defined by the fourth radius and located between the tread edge (defined by the maximum width of the ground contact area) and the transition point between the third radius and fourth radius. Although distance RA is not illustrated in figures 1 and 2 of Tokutake, area 26d is illustrated and the claimed area defined by the fourth radius generally corresponds to area 26d shown by Tokutake. As can be seen from a cursory comparison of applicants figure 2 and Tokutake's figure 1, applicant's region having width RA has a size similar to the size of region 26d of Tokutake. The claimed specific width (1.5-14% tread width) of the area defined by the fourth radius and located between the tread edge and the transition between the third radius and fourth radius would have been obvious and could have been determined without undue experimentation in view of Tokutake's teaching to use only four radii to *define the outer contour of the tread and improve the tire ground contact property* wherein illustrated region 26d (which is defined by the smallest radius) has a width smaller than the other regions. Tokutake's teaching to improve ground contact property and the illustration of region 26d being smaller than the other regions provides ample guidance as to what the width of the region defined by the fourth radius (distance RA) can and should be.

As to claims 9 and 10, the limitations of the first radius  $TR_1$  being 3-25 times tread width TW (claim 9) or 3-6 times tread width TW (claim 10) would have been obvious in view of (a) Tokutake's teaching to use a first radius K1 of 1600 mm and a tread width of 203 mm (the first radius being 7.9 times the tread width) and optionally (b) Japan '802's teaching that first radius RC is 3.1-3.4 times tread width WT. See col. 3 lines 3-9 of Tokutake.

As to claim 12, the limitation of the area for second radius  $TR_2$  being 15-90% of tread width TW would have been obvious since (a) Tokutake's figure 1 illustration of the outer most point of region 26b indicates that the separation of the outermost points of regions 26b is more than 50% tread width and optionally (b) Japan '802's teaching to use second radius RM to define intermediate regions wherein the axially outer points of the intermediate regions define a distance of 80% of tread width WT.

As to claim 14, the limitation therein regarding the location of the transition to the shoulder radius (fourth radius) would have been obvious in view of Tokutake's teaching to locate a fourth radius at a small outermost region 26d of a tread in order to improve the tire ground contact performance.

#### Remarks

6) The 102(e) rejection using Iwasaki has been withdrawn in view of the amendment to claim 8.

Applicant's arguments with respect to claims 8-10, 12 and 14 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 4-16-04 and 3-15-04 have been fully considered but they are not persuasive.

With respect to Japan '802, applicant's argument that Japan '802 does not mention the relationship  $0.1 TW \leq TW_1 \leq 0.7 TW$  is not persuasive since Japan '802 discloses 35% TW (2x.17x 100% tread width WT), which falls within the claimed range of 10-70%. Applicant's argument that Japan '802 does not show the alternative definition is not persuasive since no claim requires the alternative definition.

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With respect to Iwasaki, applicant argues that Iwasaki teaches a continuously decreasing radius from the equator to the tread edges. More properly, Tokutake teaches using only four radii.

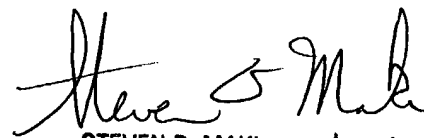
7) No claim is allowed.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 29, 2004

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
~~GROUP 1300~~  
AV 1733 4-29-04